ET420197492US

10047028.041502

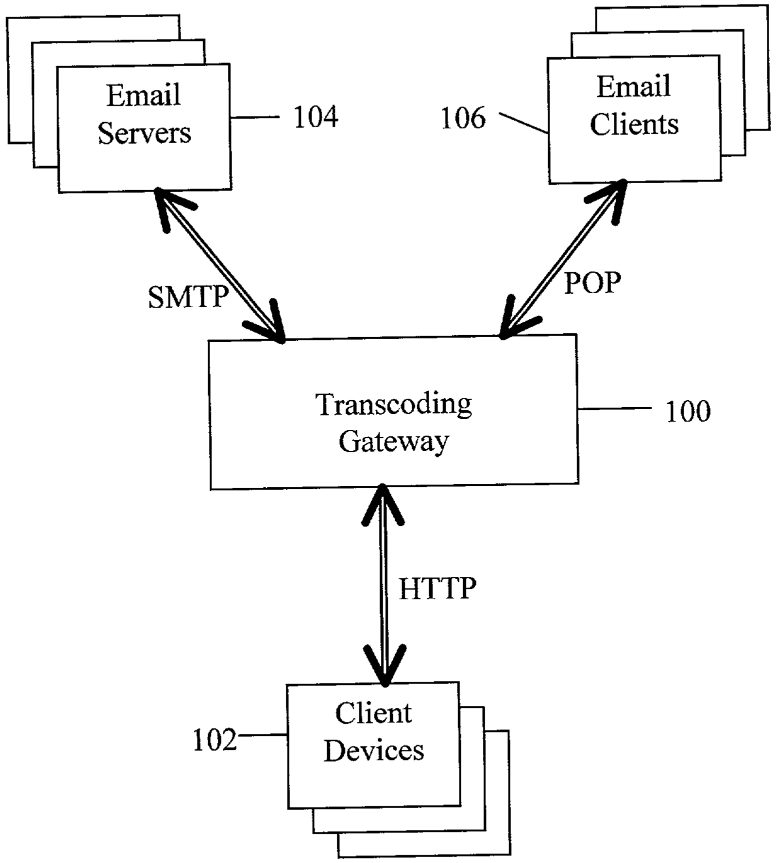

Email Servers
104
106
Email Clients
SMTP
POP
Transcoding Gateway
100
HTTP
102
Client Devices

Figure 1

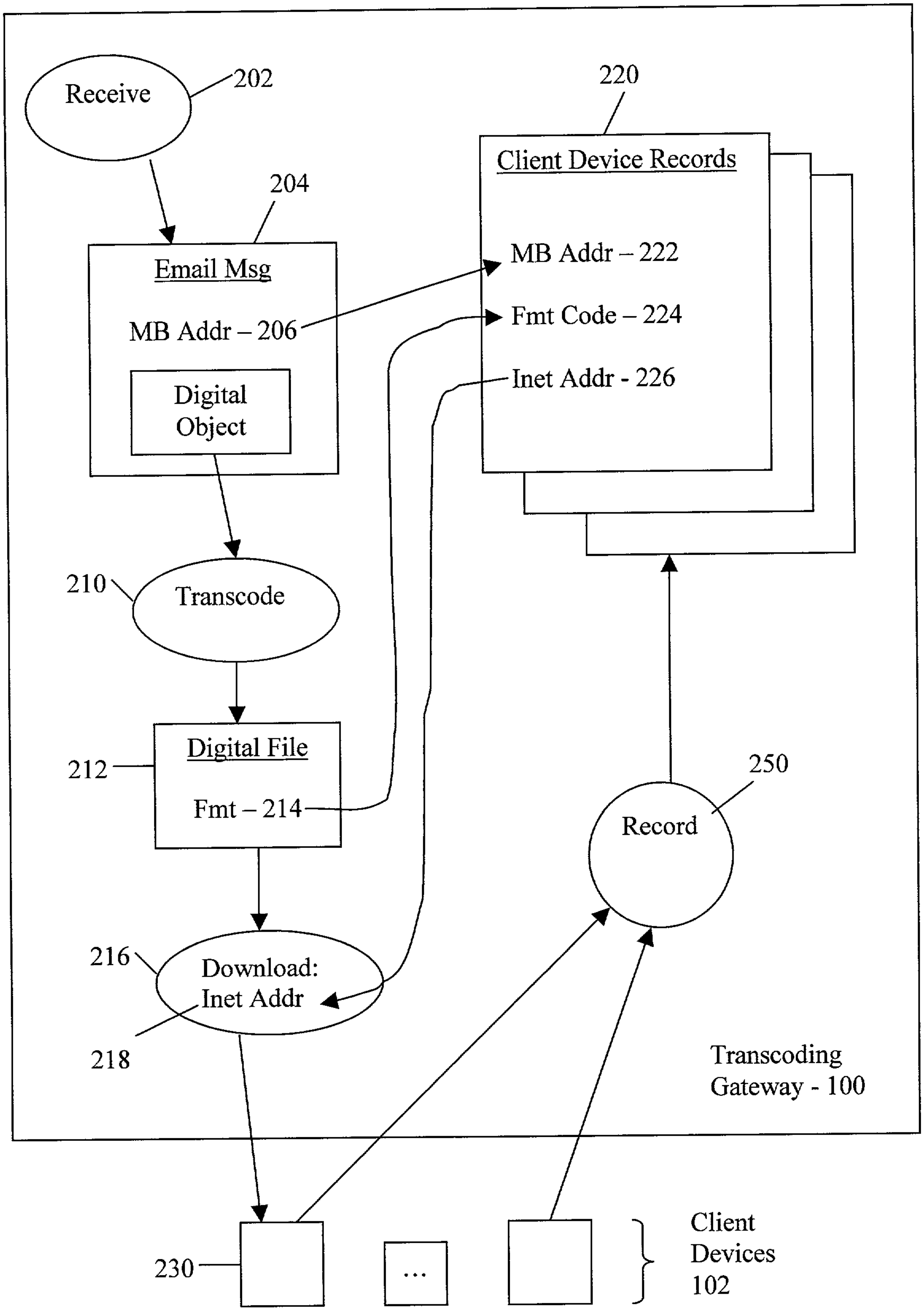

Receive
202
220
Client Device Records
204
Email Msg
MB Addr – 206
Digital Object
MB Addr – 222
Fmt Code – 224
Inet Addr - 226
210
Transcode
212
Digital File
Fmt – 214
250
Record
216
Download: Inet Addr
218
Transcoding Gateway - 100
230
...
Client Devices 102

Figure 1a

10047918.011502

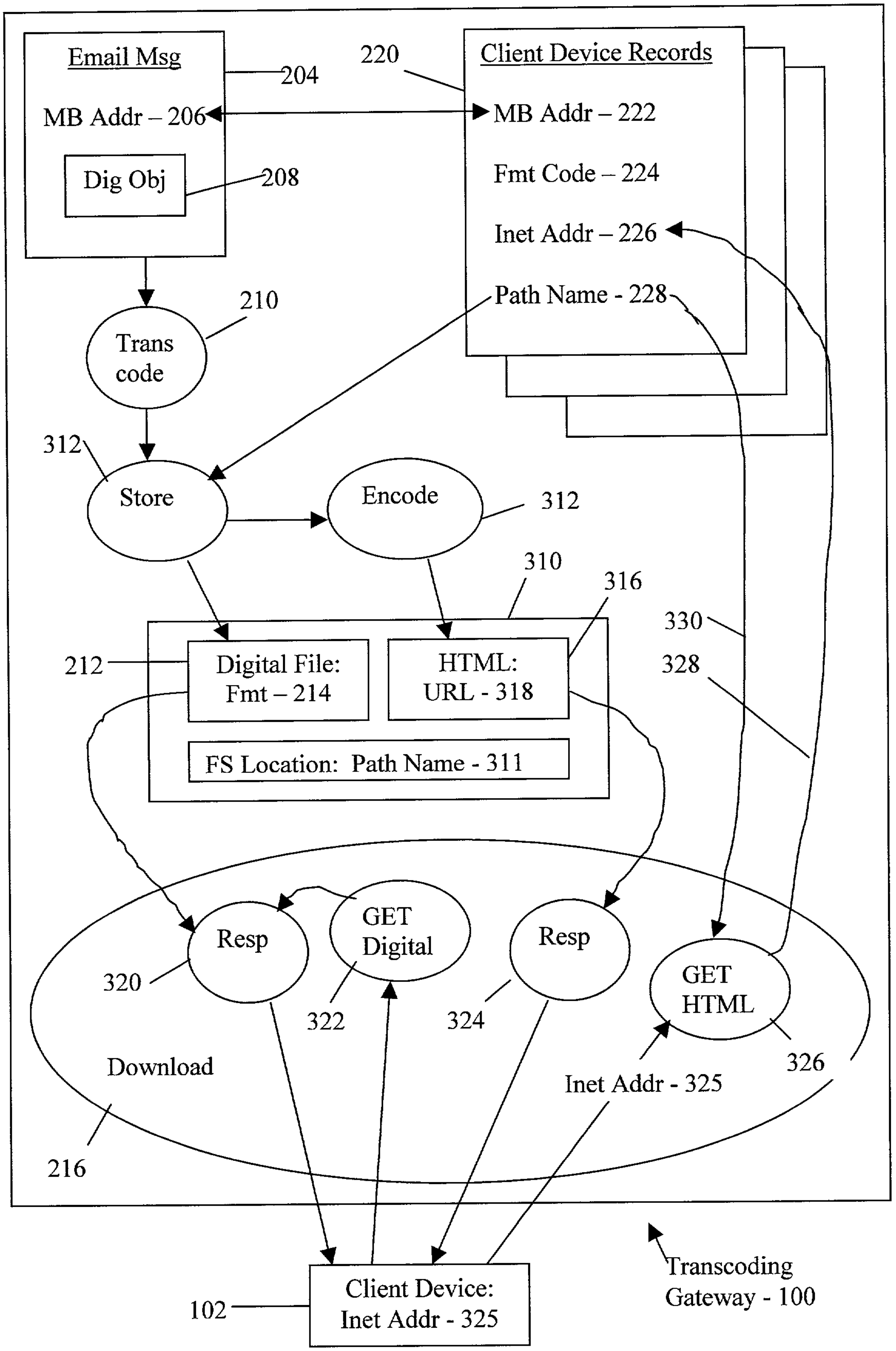

Email Msg
204
MB Addr – 206
Dig Obj
208
220
Client Device Records
MB Addr – 222
Fmt Code – 224
Inet Addr – 226
Path Name - 228
Trans code
210
312
Store
Encode
312
310
316
330
328
212
Digital File: Fmt – 214
HTML: URL - 318
FS Location: Path Name - 311
Resp
GET Digital
Resp
GET HTML
320
322
324
326
Download
Inet Addr - 325
216
102
Client Device: Inet Addr - 325
Transcoding Gateway - 100

Figure 1b

10045108.011502

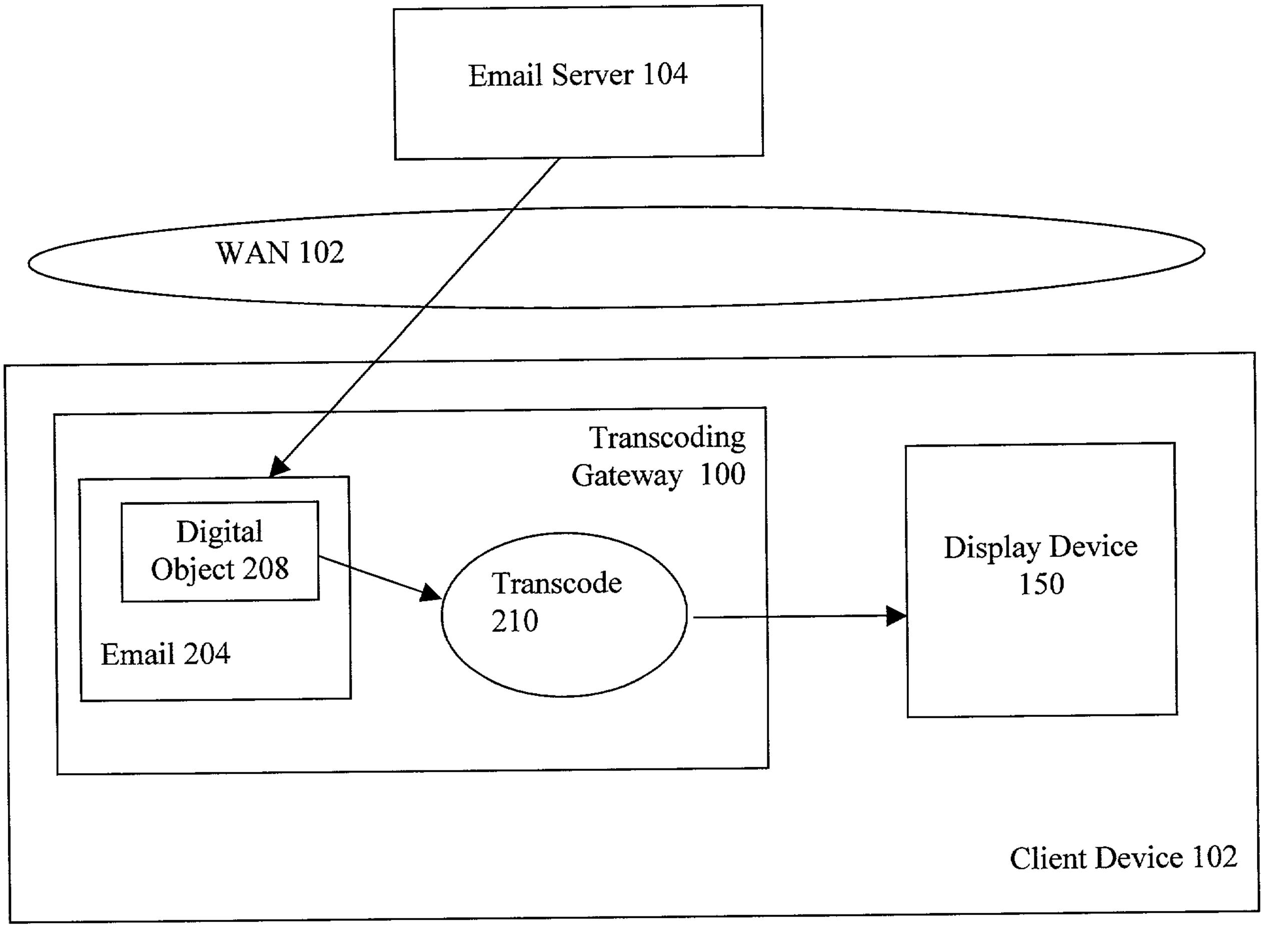

Email Server 104
WAN 102
Transcoding Gateway 100
Digital Object 208
Email 204
Transcode 210
Display Device 150
Client Device 102

Figure 2

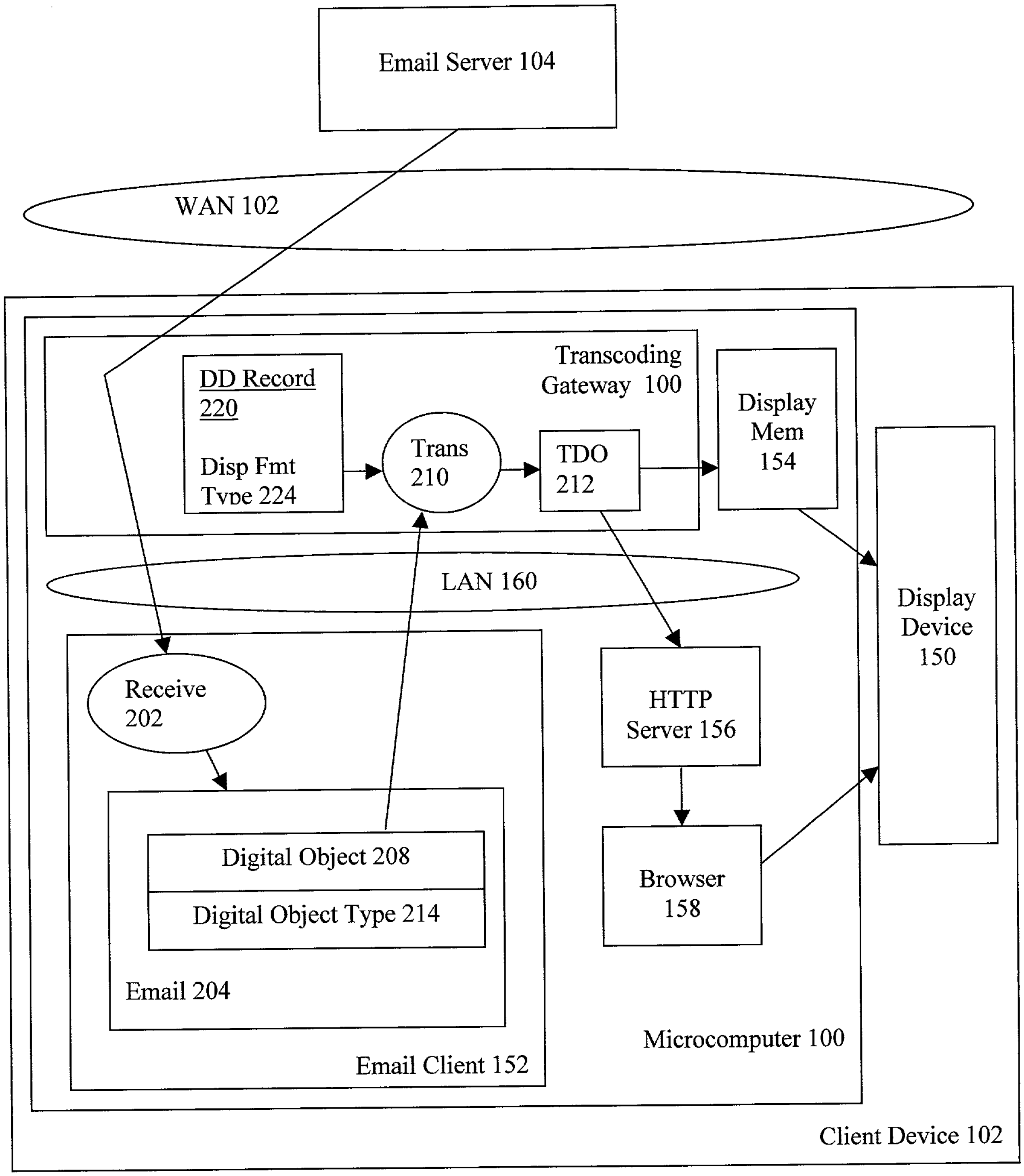

Email Server 104
WAN 102
DD Record 220
Disp Fmt Type 224
Trans 210
TDO 212
Transcoding Gateway 100
Display Mem 154
LAN 160
Display Device 150
Receive 202
Digital Object 208
Digital Object Type 214
Email 204
Email Client 152
HTTP Server 156
Browser 158
Microcomputer 100
Client Device 102

Figure 3

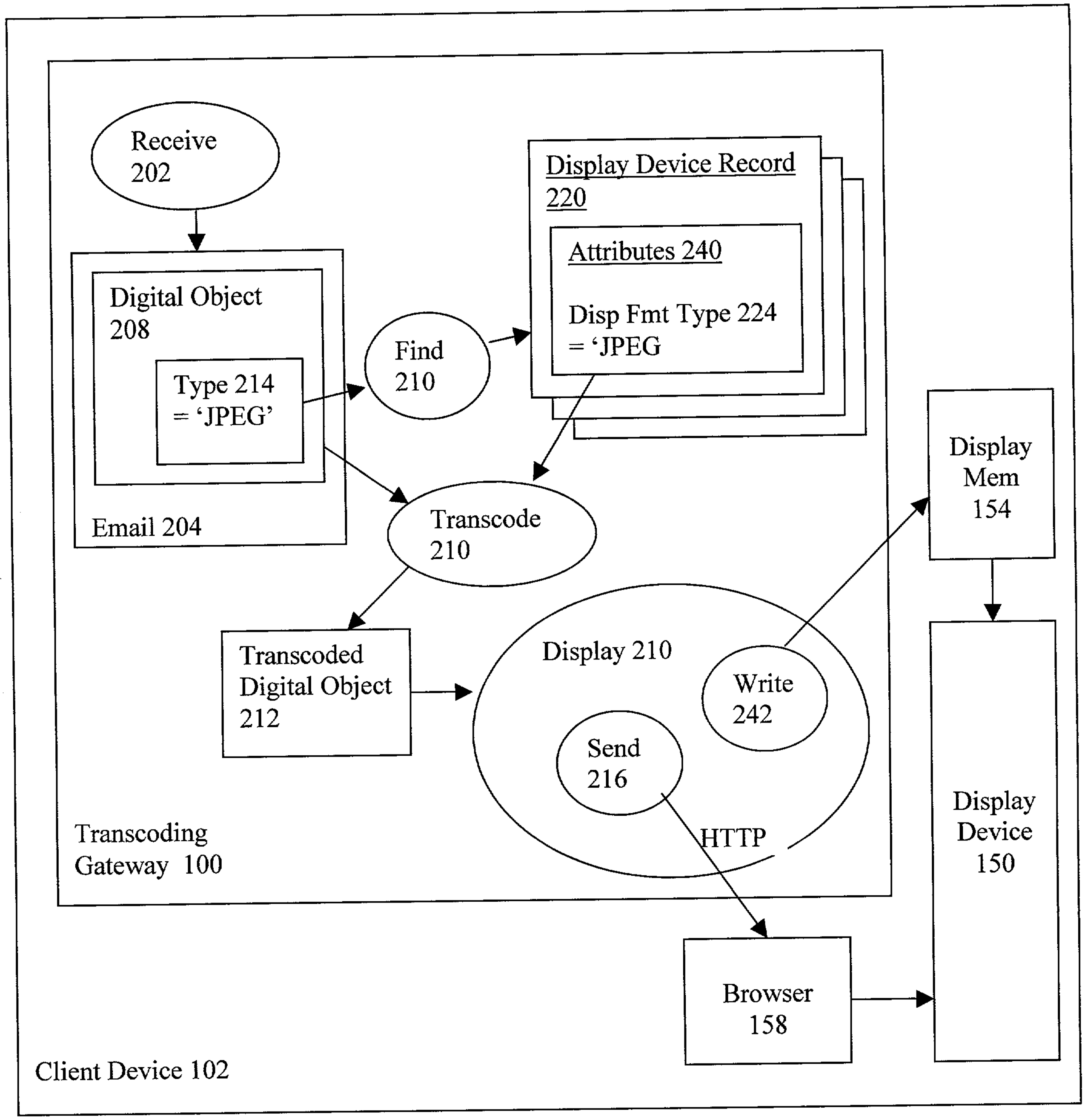

Receive
202
Digital Object
208
Type 214
= 'JPEG'
Email 204
Find
210
Display Device Record
220
Attributes 240
Disp Fmt Type 224
= 'JPEG
Transcode
210
Transcoded
Digital Object
212
Display 210
Write
242
Send
216
HTTP
Transcoding
Gateway 100
Display
Mem
154
Display
Device
150
Browser
158
Client Device 102

Figure 4

20051015 04104201

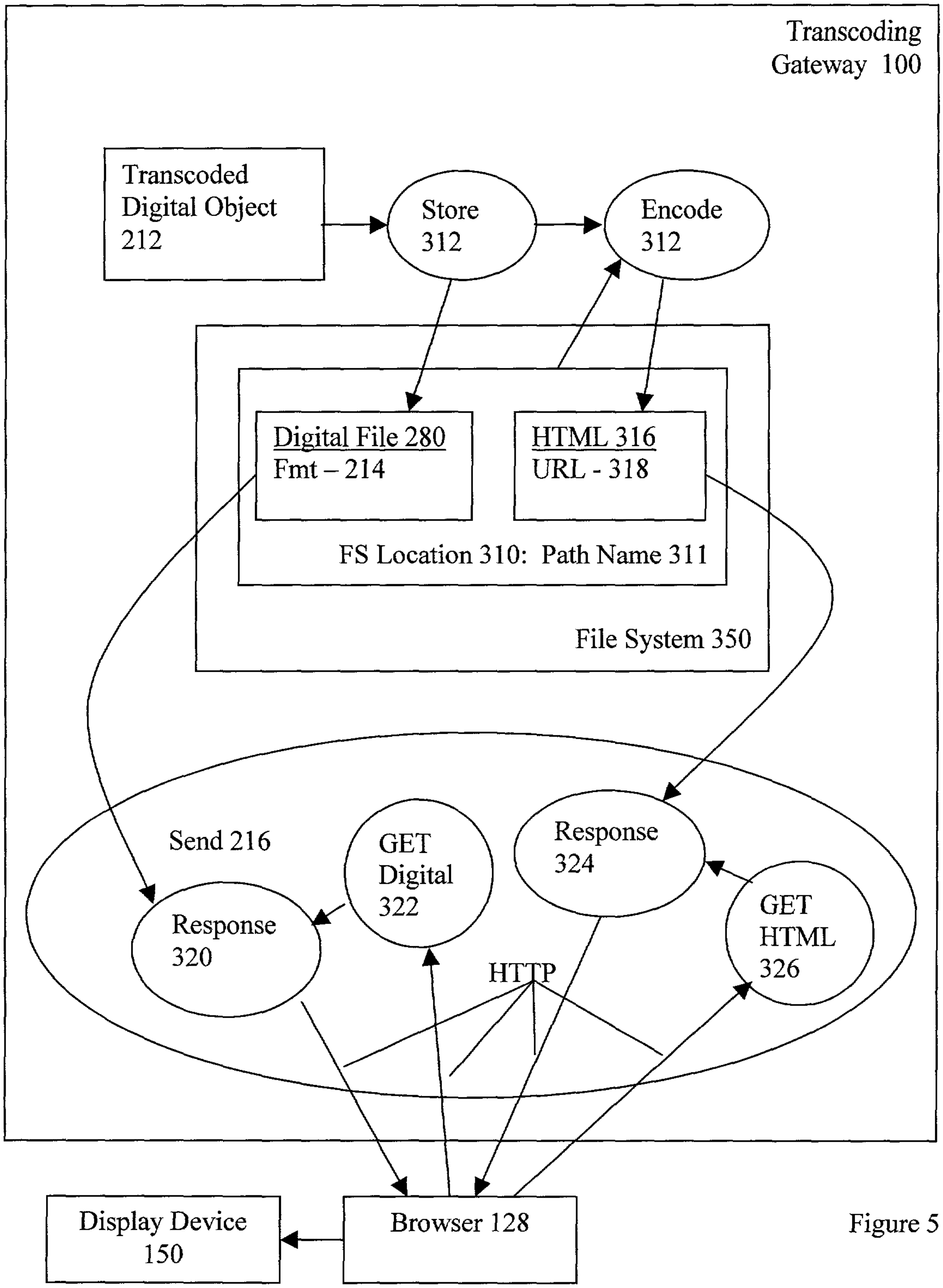

Transcoding Gateway 100
Transcoded Digital Object 212
Store 312
Encode 312
Digital File 280
Fmt – 214
HTML 316
URL - 318
FS Location 310: Path Name 311
File System 350
Send 216
GET Digital 322
Response 324
Response 320
GET HTML 326
HTTP
Display Device 150
Browser 128

Figure 5

10047018.011502

Display Device Record 220

224 Display Format Type = 'JPEG'

502 Display Device Type = 'PDA'

504 Screen Size = '240x360'

506 Color Available = 'No'

Figure 6

Display Device Record 220

224 Display Format Type = 'TTS'

502 Display Device Type = 'TTS Converter'

508 Volume Level = '5'

510 Speed = '100'

512 Pitch = '5'

Figure 7

10047018.011502

Display Device Record 220

224 Display Format Type = 'TextOverlay'

502 Display Device Type = 'Overlay Driver'

802 Row = '5'

804 Column = '10'

Figure 8

Display Device Record 220

224 Display Format Type = 'MPEG'

502 Display Device Type = 'Video Display'

902 MaxFrameRate = '32'

Figure 9

Display Device Record 220

224 Display Format Type = 'MP3'

502 Display Device Type = 'Audio Player'

Figure 10

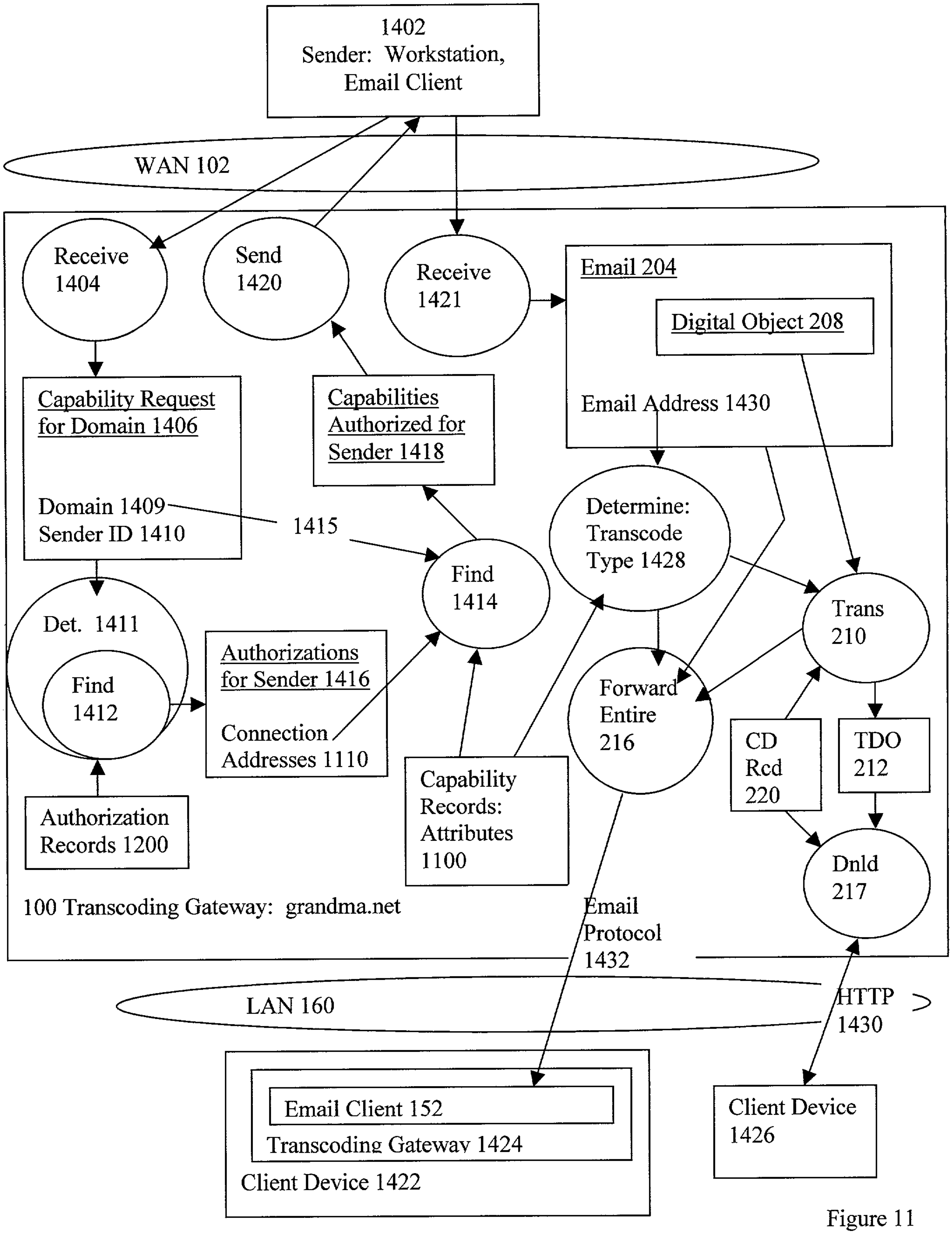

1402
Sender: Workstation, Email Client
WAN 102
Receive 1404
Send 1420
Receive 1421
Email 204
Digital Object 208
Email Address 1430
Capability Request for Domain 1406
Domain 1409
Sender ID 1410
Capabilities Authorized for Sender 1418
1415
Find 1414
Determine: Transcode Type 1428
Trans 210
Det. 1411
Find 1412
Authorizations for Sender 1416
Connection Addresses 1110
Forward Entire 216
CD Rcd 220
TDO 212
Authorization Records 1200
Capability Records: Attributes 1100
Dnld 217
100 Transcoding Gateway: grandma.net
Email Protocol 1432
LAN 160
HTTP 1430
Email Client 152
Transcoding Gateway 1424
Client Device 1422
Client Device 1426

Figure 11

10054042.041502

Display Capability Records
1100

Capability ID 1102	Capability Description 1104	Domain 1106	Connection Type 1108	Connection Address 1110	Transcode Type 1111
1150	Video on Grandma's PC	grandma.net	Email	grandma@grandma.net	Forward
1152	Audio on Grandma's PC	grandma.net	Email	grandma@grandma.net	Forward
1154	Video on Grandma's TV	grandma.net	Email	gm-tv@grandma.net	Forward
1156	Audio on Grandma's TV	grandma.net	Email	gm-tv@grandma.net	Forward
1158	TTS in Grandma's Car	grandma.net	Email	gm-car@grandma.net	Forward
1160	Recipe Database on Grandma's Kitchen Stove	grandma.net	Email	recipes@grandma.net	Forward
1162	Image on Grandma's PDA	grandma.net	Email	gm-PDA@grandma.net	Forward
1164	Image on DAF in Grandma's Living Room	grandma.net	HTTP	gm-daf@grandma.net	Transcode Here & Forward
1166	Text Overlay on DAF in Grandma's Living Room	grandma.net	HTTP	gm-daf@grandma.net	Transcode Here & Forward
1168	Audio on Grandma's Stereo	grandma.net	HTTP	gm-stereo@grandma.net	Transcode Here
1170	Video Somewhere Else	someother.net	Email	x@someother.net	Forward
1172	Audio Player Coupled To This Gateway	someother.net	HTTP	y@someother.net	Transcode Here & Forward
1174	TTS Somewhere Else	someother.net	Email	z@someother.net	Forward

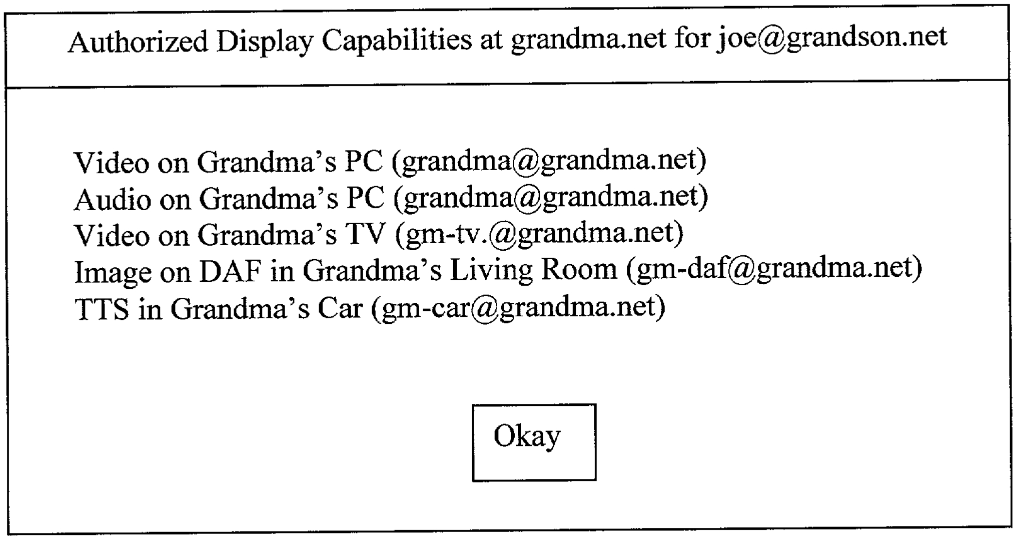
Figure 12

Sender Authorization Records 1200

Domain: grandma.net

Authorization Record ID 1202	Connection Address 1110	Authorized Sender 1204
1250	grandma@grandma.net	joe@grandson.net
1252	gm-tv.@grandma.net	joe@grandson.net
1254	gm-daf@grandma.net	joe@grandson.net
1256	gm-car@grandma.net	joe@grandson.net
1258	grandma@grandma.net	mike@soninlaw.net
1260	grandma@grandma.net	pete@favoritenephew.net
1262	gm-tv.@grandma.net	pete@favoritenephew.net
1264	gm-daf@grandma.net	pete@favoritenephew.net
1268	gm-car@grandma.net	pete@favoritenephew.net
1270	gm-PDA@grandma.net	pete@favoritenephew.net
1272	recipes@grandma.net	pete@favoritenephew.net

Figure 13



Authorized Display Capabilities at grandma.net for joe@grandson.net

Video on Grandma’s PC (grandma@grandma.net)
Audio on Grandma’s PC (grandma@grandma.net)
Video on Grandma’s TV (gm-tv.@grandma.net)
Image on DAF in Grandma’s Living Room (gm-daf@grandma.net)
TTS in Grandma’s Car (gm-car@grandma.net)

Figure 14

Virtual Address Forwarding Records - 1500		
Virtual Address Forwarding Record ID -1502	Virtual Address 1504	Corresponding Conventional Forwarding Address 1506
1550	gm-daf@grandma.net	grandma@grandma.net
1552	gm-stereo@grandma.net	
1554	y@someother.net	z@someother.net

Figure 15

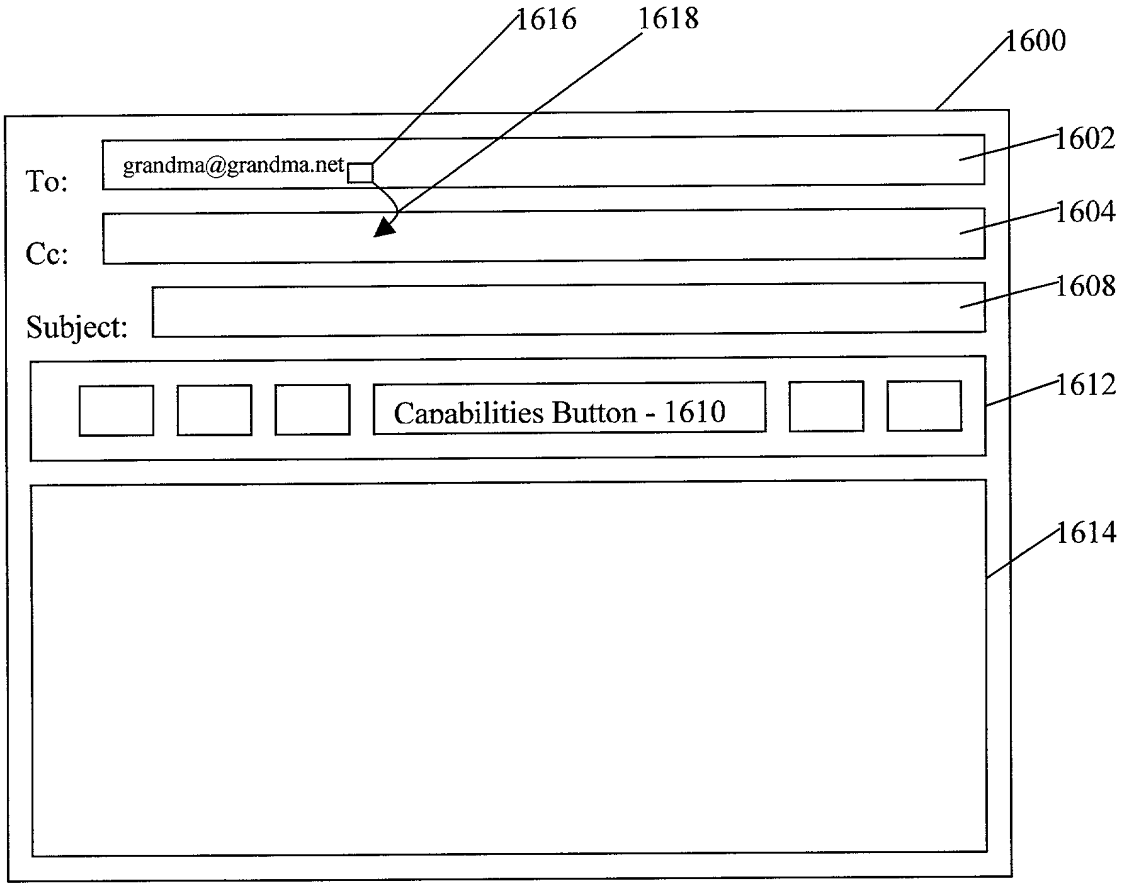

1616
1618
1600
To:
grandma@grandma.net
1602
Cc:
1604
Subject:
1608
Capabilities Button - 1610
1612
1614

Figure 16

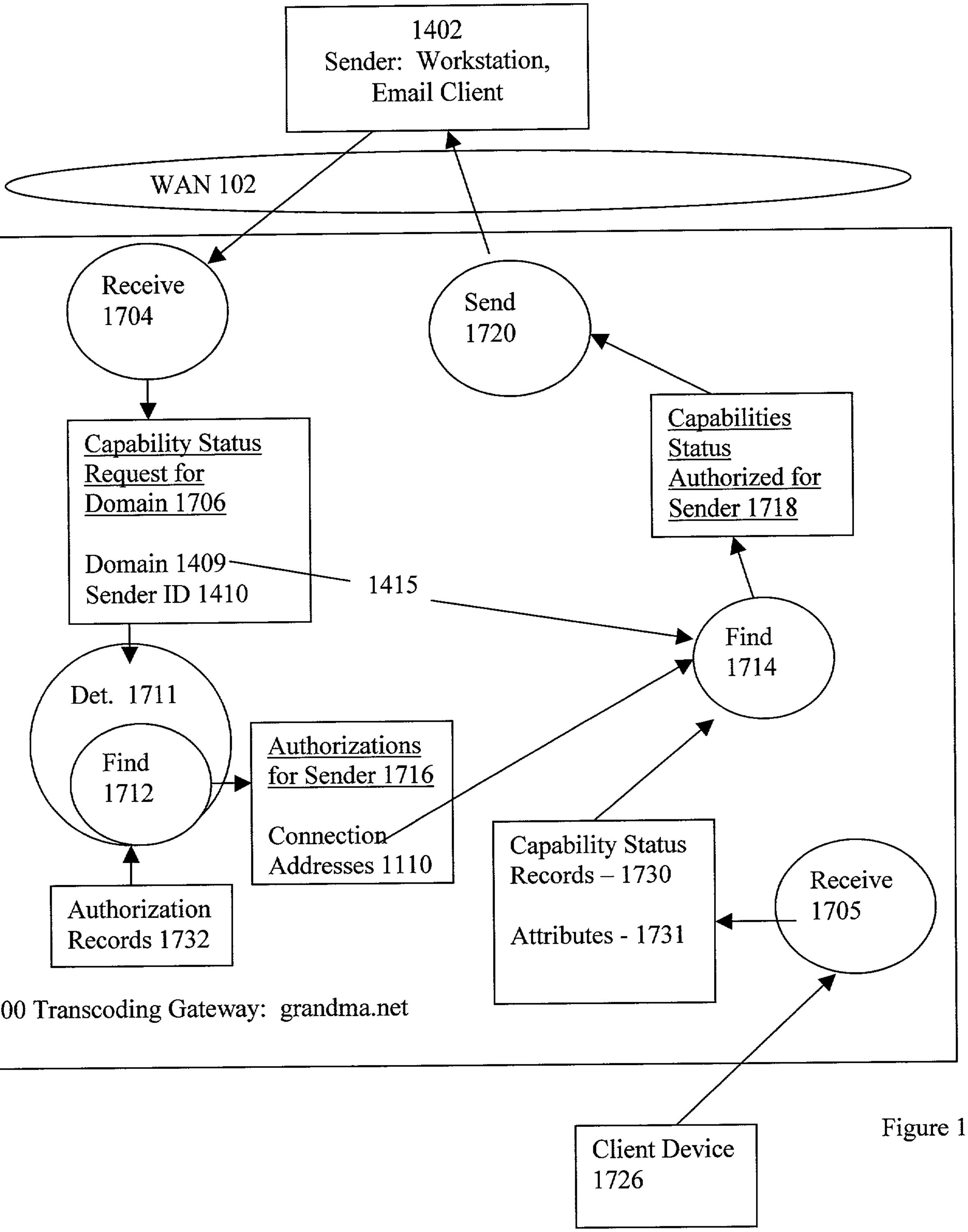

1402
Sender: Workstation, Email Client
WAN 102
Receive 1704
Send 1720
Capability Status Request for Domain 1706
Domain 1409
Sender ID 1410
1415
Capabilities Status Authorized for Sender 1718
Find 1714
Det. 1711
Find 1712
Authorizations for Sender 1716
Connection Addresses 1110
Capability Status Records – 1730
Attributes - 1731
Receive 1705
Authorization Records 1732
100 Transcoding Gateway: grandma.net
Client Device 1726

Figure 17

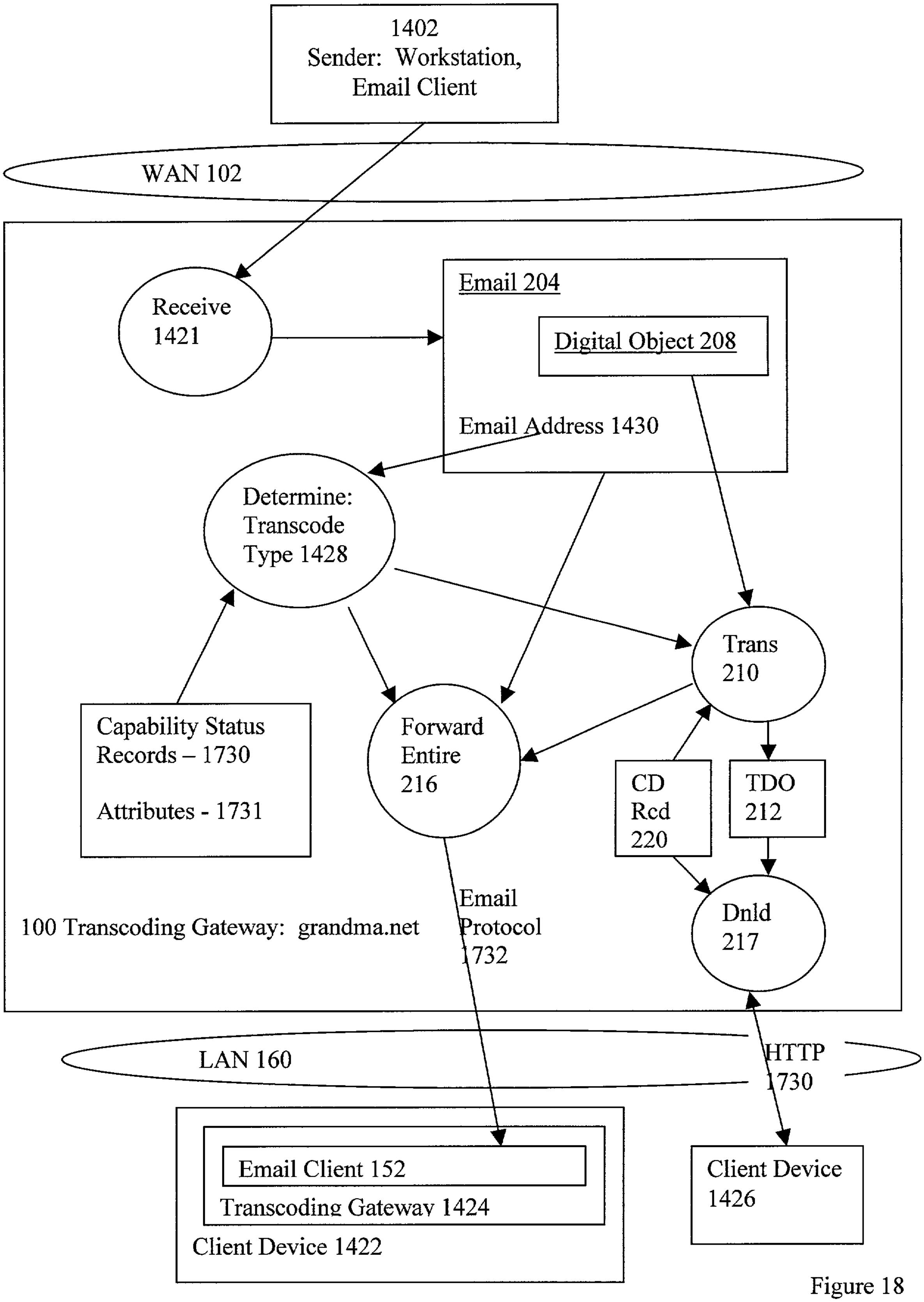

1402
Sender: Workstation, Email Client
WAN 102
Receive 1421
Email 204
Digital Object 208
Email Address 1430
Determine: Transcode Type 1428
Trans 210
Forward Entire 216
Capability Status Records – 1730
Attributes - 1731
CD Rcd 220
TDO 212
Dnld 217
Email Protocol 1732
100 Transcoding Gateway: grandma.net
LAN 160
HTTP 1730
Email Client 152
Transcoding Gateway 1424
Client Device 1422
Client Device 1426

Figure 18

Display Capability Status Records - 1730

Domain: grandma.net - 1409

Capability ID 1102	Capability Description 1104	Status: Availability 1904	Status: Recent Usage 1906	Connect Type 1108	Connection Address 1110	Transcode Type 1111
1950	Video on Grandma's PC	Off	Yesterday	Email	grandma@grandma.net	Forward
1952	Audio on Grandma's PC	Off	Yesterday	Email	grandma@grandma.net	Forward
1954	Video on Grandma's TV	On	Last Week	Email	gm-tv@grandma.net	Forward
1956	Audio on Grandma's TV	On	Last Week	Email	gm-tv@grandma.net	Forward
1958	TTS in Grandma's Car	On	Yesterday	Email	gm-car@grandma.net	Forward
1960	Recipe Database on Grandma's Kitchen Stove	On	Last Week	Email	recipes@grandma.net	Forward
1962	Image on Grandma's PDA	On	Today 3 Minutes Ago	Email	gm-PDA@grandma.net	Forward
1964	Image on DAF in Grandma's Living Room	On	Yesterday	HTTP	gm-daf@grandma.net	Transcode Here & Forward
1966	Text Overlay on DAF in Grandma's Living Room	On	Yesterday	HTTP	gm-daf@grandma.net	Transcode Here & Forward
1968	Audio on Grandma's Stereo	Off	Yesterday	HTTP	gm-stereo@grandma.net	Transcode Here

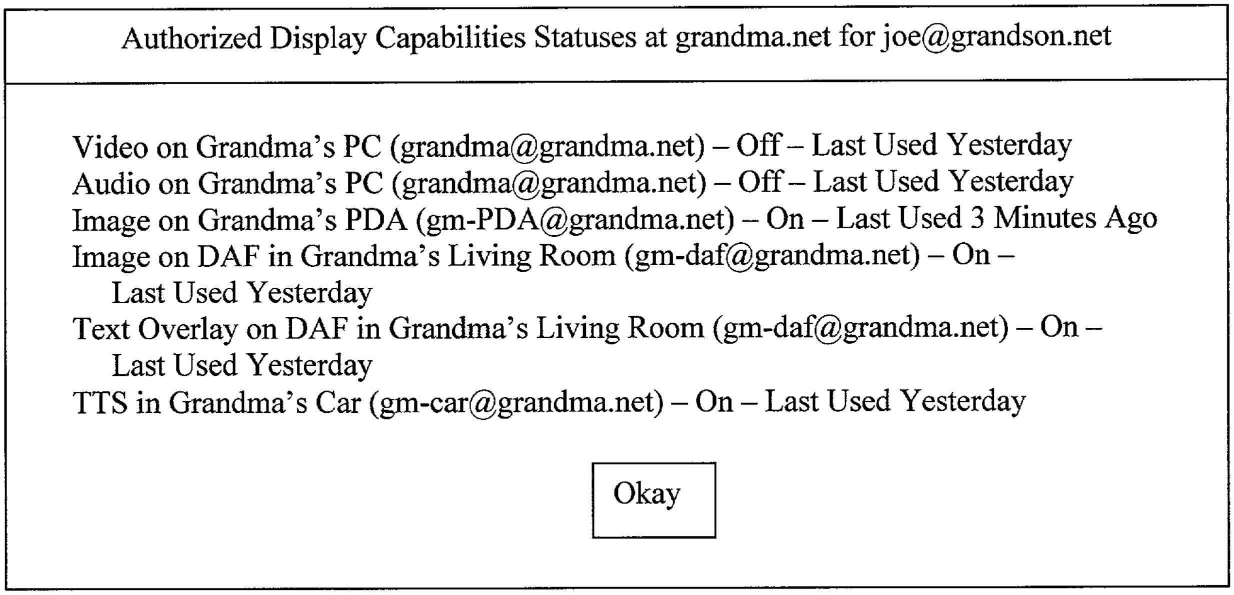
Figure 19

Sender Authorization Records - 2002

Domain: grandma.net

Authorization Record ID 1202	Connection Address 1110	Authorized Sender 1204
2050	grandma@grandma.net	joe@grandson.net
2052	gm-PDA.@grandma.net	joe@grandson.net
2054	gm-daf@grandma.net	joe@grandson.net
2056	gm-car@grandma.net	joe@grandson.net
2058	grandma@grandma.net	mike@soninlaw.net
2060	grandma@grandma.net	pete@favoritenephew.net
2062	gm-tv.@grandma.net	pete@favoritenephew.net
2064	gm-daf@grandma.net	pete@favoritenephew.net
2068	gm-car@grandma.net	pete@favoritenephew.net
2070	gm-PDA@grandma.net	pete@favoritenephew.net
2072	recipes@grandma.net	pete@favoritenephew.net

Figure 20



Authorized Display Capabilities Statuses at grandma.net for joe@grandson.net

Video on Grandma's PC (grandma@grandma.net) – Off – Last Used Yesterday
Audio on Grandma's PC (grandma@grandma.net) – Off – Last Used Yesterday
Image on Grandma's PDA (gm-PDA@grandma.net) – On – Last Used 3 Minutes Ago
Image on DAF in Grandma's Living Room (gm-daf@grandma.net) – On – Last Used Yesterday
Text Overlay on DAF in Grandma's Living Room (gm-daf@grandma.net) – On – Last Used Yesterday
TTS in Grandma's Car (gm-car@grandma.net) – On – Last Used Yesterday

Figure 21

Virtual Address Forwarding Records - 1500

Virtual Address Forwarding Record ID -1502	Virtual Address 1504	Corresponding Conventional Forwarding Address 1506
1550	gm-daf@grandma.net	grandma@grandma.net
1552	gm-stereo@grandma.net	
1554	y@someother.net	z@someother.net

Figure 22

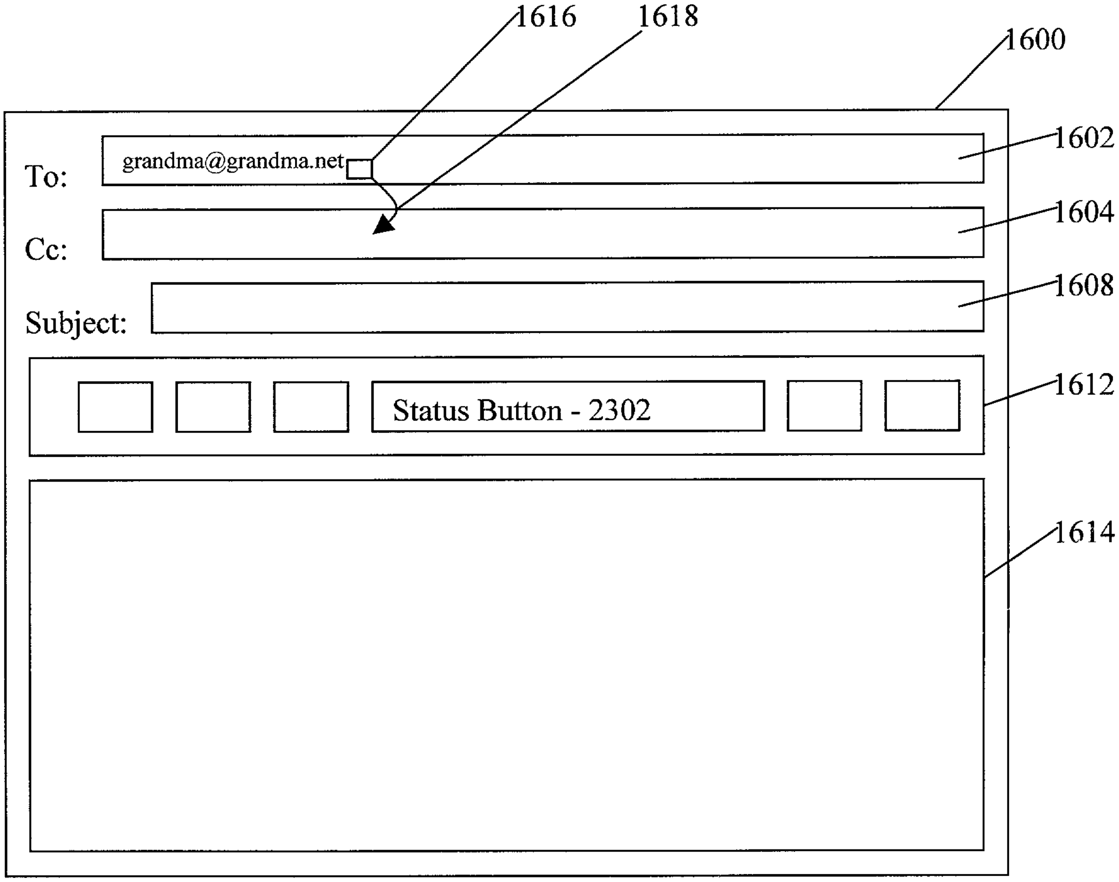

1616
1618
1600
To:
grandma@grandma.net
1602
Cc:
1604
Subject:
1608
Status Button - 2302
1612
1614

Figure 23

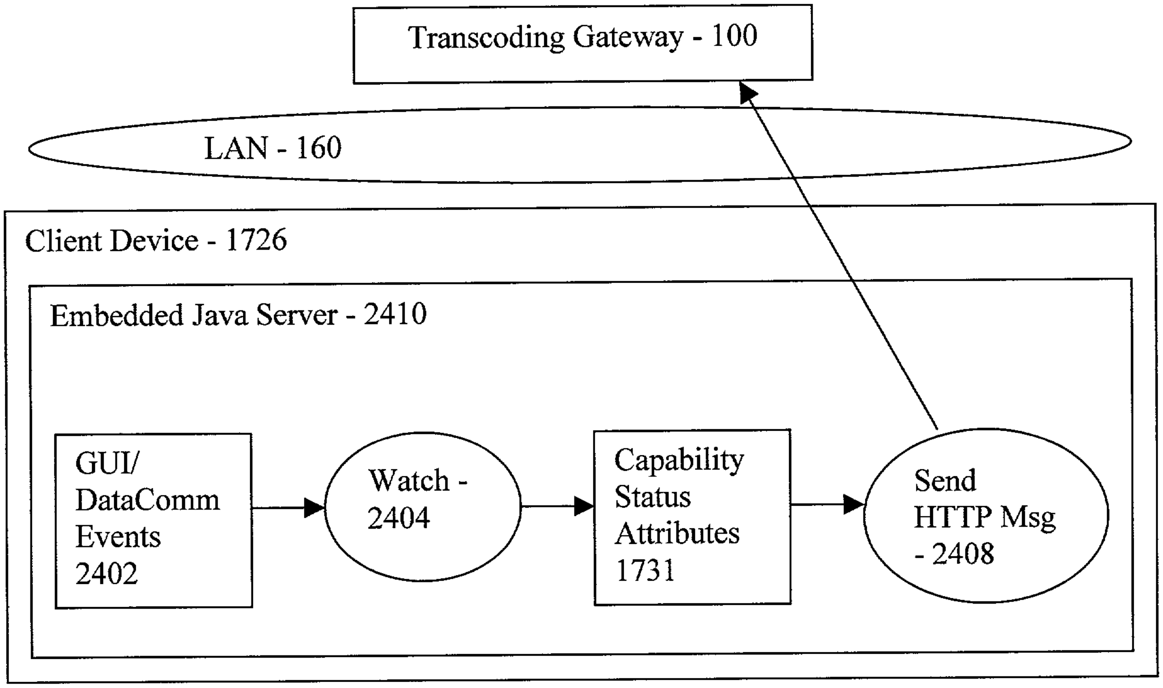

Transcoding Gateway - 100
LAN - 160
Client Device - 1726
Embedded Java Server - 2410
GUI/ DataComm Events 2402
Watch - 2404
Capability Status Attributes 1731
Send HTTP Msg - 2408

Figure 24

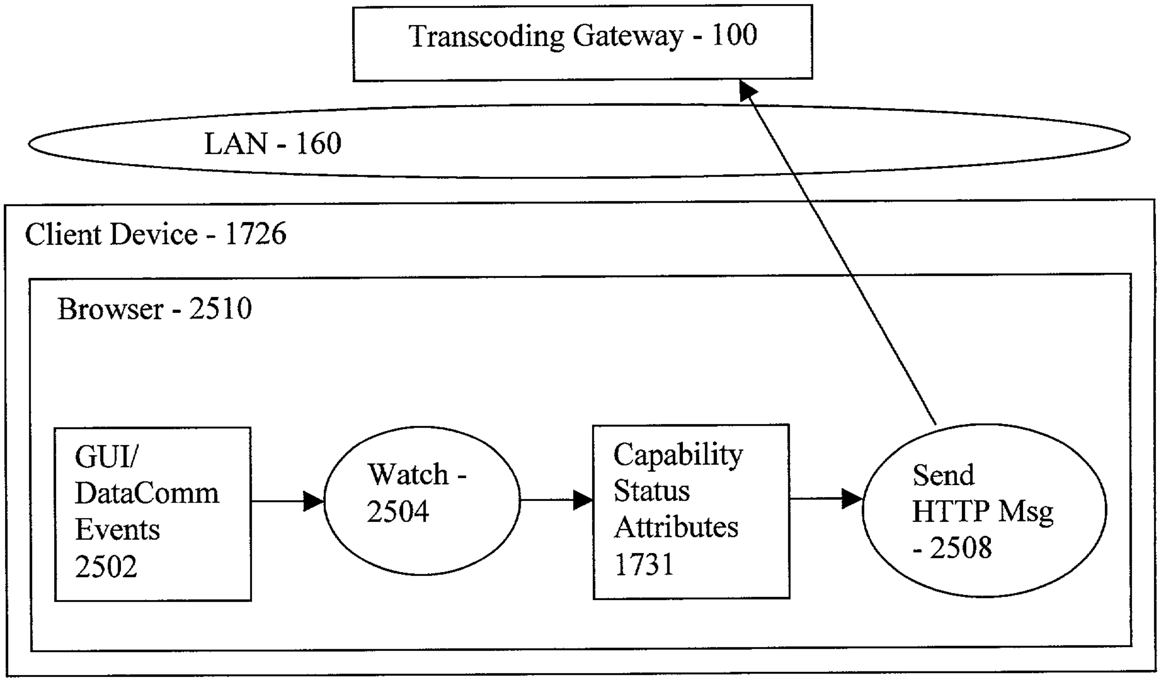

Transcoding Gateway - 100
LAN - 160
Client Device - 1726
Browser - 2510
GUI/ DataComm Events 2502
Watch - 2504
Capability Status Attributes 1731
Send HTTP Msg - 2508

Figure 25

10051042.021502

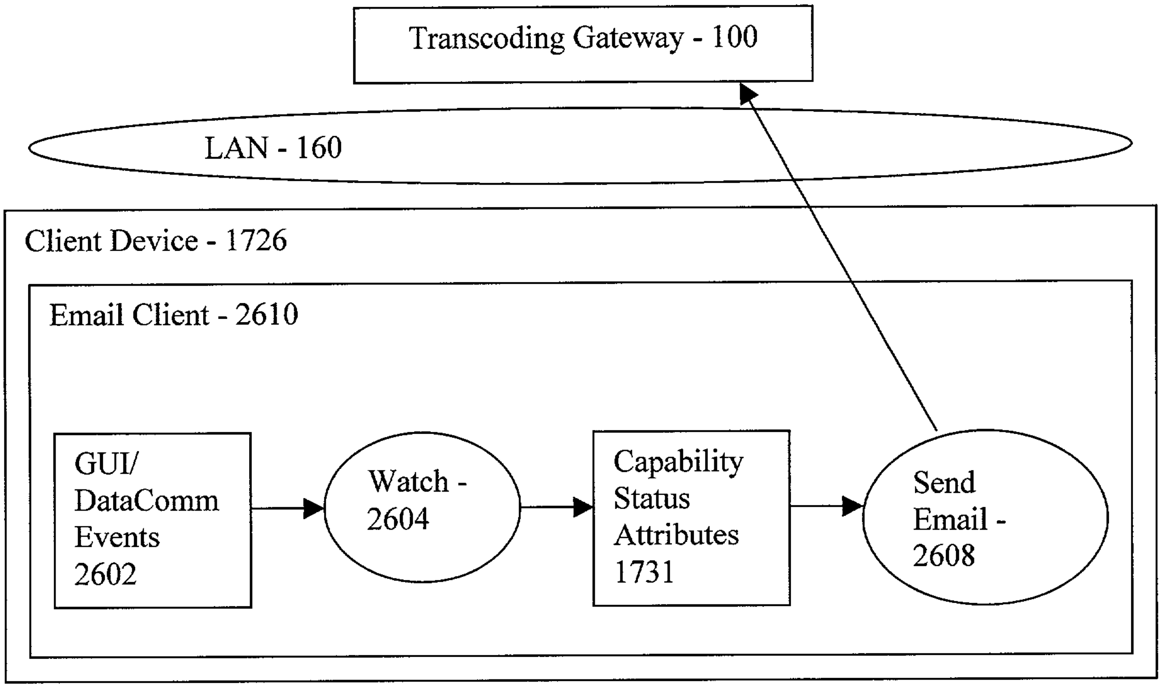

Transcoding Gateway - 100
LAN - 160
Client Device - 1726
Email Client - 2610
GUI/ DataComm Events 2602
Watch - 2604
Capability Status Attributes 1731
Send Email - 2608

Figure 26

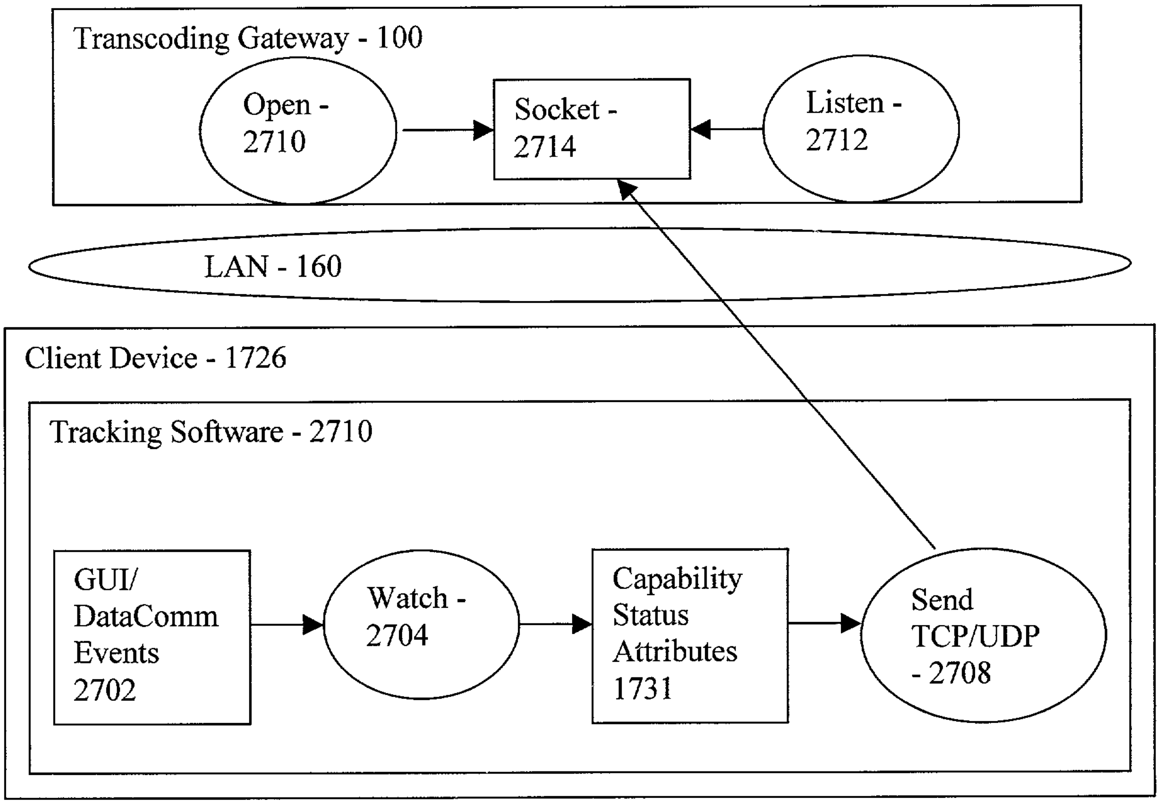

Transcoding Gateway - 100
Open - 2710
Socket - 2714
Listen - 2712
LAN - 160
Client Device - 1726
Tracking Software - 2710
GUI/ DataComm Events 2702
Watch - 2704
Capability Status Attributes 1731
Send TCP/UDP - 2708

Figure 27